GOVERNMENT OF ALBERTA
EMERGENCY RESPONSE PLAN
FOR A
SOUR GAS RELEASE

Alberta

EDITION 3/86

EMERGENCY TELEPHONE NUMBERS

Energy Resources Conservation Board

Calgary Head Office	297-8311 297-3417

ERCB Field Offices - 24 Hour Numbers

Bonnyville	826-5352
Calgary	256-1474
Drayton Valley	542-5182
Edmonton	427-0200
Grande Prairie	538-5138
Medicine Hat	527-3385
Red Deer	340-5454
Wainwright	842-4431
Whitecourt	778-3812

Alberta Public Safety Services

Duty Centre	1-800-272-9600 (Outside Edmonton) 422-9600 (Edmonton Area)
Alberta Government Telephones/ Provincial Service Co-ordination Centre	231-7370 (Calgary)
Alberta Energy and Natural Resources	427-3587 (Edmonton)
Environment	1-800-222-6514 (Province-wide)
Occupational Health & Safety - North	427-8848 (Edmonton)
- South	297-2222 (Calgary)

RCMP (Local) _____

Municipal Director of Disaster Services (Local) _____

Health Unit (Local) _____

GOVERNMENT OF ALBERTA

EMERGENCY RESPONSE PLAN

FOR A SOUR GAS RELEASE

The petroleum industry is a major contributor to the economy of Alberta. While there are inherent risks in the production and refining of most energy products, those associated with sour gas (which contain hydrogen sulphide) could threaten the health and safety of residents living near the facilities. To protect public safety and minimize hazards associated with sour gas operations it is important that everyone involved, the industrial operator, the individual citizen, the municipality and the government take responsible measures to reduce hazards and respond quickly and effectively should an incident occur.

This Plan is one of several co-operative and overlapping plans: industry has both general and site specific plans, and municipalities have their own emergency operations plans. This Government Plan is designed to direct the Provincial Government's response to a sour gas release anywhere in Alberta by assisting the Energy Resources Conservation Board in overseeing the operator's activities to bring a release under control as safely and as quickly as possible.

This third edition of the plan incorporates ideas and refinements gained from the public and from experience encountered during three real incidents and four exercises. It also contains many of the suggestions put forward during the public forums held in October and November 1985. However, not all the input from the forums could or should be included in this plan. Much of the detailed information is more properly included in departmental and agency procedures which reflect how responsibilities are carried out and are subject to frequent amendment.

Any suggestions for further improvement would be welcomed by Alberta Public Safety Services which has the responsibility for ensuring the plan is reviewed and tested regularly.

Marv Moore

Marvin E. Moore
Minister
Alberta Public Safety Services

GOVERNMENT OF ALBERTA

EMERGENCY RESPONSE PLAN

FOR A SOUR GAS RELEASE

March 1986

Date

I.D. MARK EGENER
MANAGING DIRECTOR
ALBERTA PUBLIC SAFETY SERVICES

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MINISTER
ALBERTA PUBLIC SAFETY SERVICES

GOVERNMENT OF ALBERTA

EMERGENCY RESPONSE PLAN

FOR A SOUR GAS RELEASE

PURPOSE

1. The purpose of the plan is to protect human health, safety and welfare by bringing all appropriate government resources into play to support the Energy Resources Conservation Board (ERCB) and the industrial operator in bringing a sour gas release under control quickly, safely and efficiently.

AUTHORITY

2. This plan is issued by the Minister, Alberta Public Safety Services (APSS) under the authority of the Public Safety Services Act, which authorizes the government to respond in a prompt and co-ordinated manner to any release of sour gas.

DEFINITIONS

3. In this plan:

a. a **sour gas release** is an uncontrolled release of natural gas containing hydrogen sulphide (H_2S) which is so declared to be a sour gas release by the Energy Resources Conservation Board (ERCB).

(1) a Category One release is one which occurs in a remote location, with no people or livestock in the area and has a low H_2S release rate.

(2) a Category Two release is any sour gas release which exceeds the Category One Sour Gas release criteria and which may pose a threat to public health or safety.

b. **Closure Order** is issued to close off a specific area to unauthorized personnel. The Closure Order area is that area within the boundaries delineated in an Order issued by ERCB under Section 89 of the Oil and Gas Conservation Act.

c. **Minister** means the Minister charged with the administration of The Public Safety Services Act.

d. an **On-site Command Post** is an operations centre set up in the immediate vicinity of the gas release to manage the emergency within the Closure Order area.

e. a **Main Control Headquarters (MCHQ)** is an operations centre set up at a suitable location, in support of the On-Site Command Post, to manage the larger aspects of the emergency, including public relations and the provision of information and advice to affected citizens, municipalities and the media.

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f. **Police** is a peace officer as defined in Section 25 (1) (0.1) of the Interpretation Act, Chapter I-7 R.S.A. 1980, as being a member of the Royal Canadian Mounted Police or a member of a municipal police force having jurisdiction in Alberta by virtue of Section 18 (1) and Section 19 of the Police Act, Chapter P-12 R.S.A. 1980.

g. **Local Authority** means:

(1) the council of a city, town, village, summer village, county or municipal district,

(2) the board of administrators of a new town,

(3) in the case of an improvement district or special area, the Minister of Municipal Affairs,

(4) the park superintendant of a national park or his delegate where an agreement is entered into with the Government of Canada under Section 61 (b) (of the Public Safety Services Act) in which it is agreed that the park superintendant is a local authority for the purposes of this act, or

(5) the band council of an Indian Band where an agreement is entered into with the Government of Canada under Section 6 (b) (of the Public Safety Services Act) in which it is agreed that the band council is a local authority for the purposes of this act.

h. **Municipal Emergency Operations Plans** means those emergency plans prepared by a Local Authority pursuant to Section 8 (e) of the Public Safety Services Act or by or in respect of a Metis Settlement.

i. **Company Emergency Response Plans** means emergency procedures plans prepared by an industrial operator pursuant to regulation 7.060 (9) (gas wells) or 9.060 (gas plants) made under the Oil and Gas Conservation Act, Regulation 65 made under the Pipeline Act (pipelines) or any other regulation, statute or condition.

j. **A State of Emergency** is a declaration by the Lieutenant Governor in Council to acquire additional powers under the Public Safety Services Act to deal with an emergency or disaster.

k. **A State of Local Emergency** is a declaration by a Local Authority to acquire additional powers under the Public Safety Services Act to deal with an emergency or disaster.

GENERAL

4. This plan explains the Government of Alberta's response to a sour gas emergency. The Energy Resources Conservation Board (ERCB) is the lead agency in overseeing response to the emergency and is responsible for initiating the plan. However, there are several other important emergency plans which come into play during sour gas emergencies.

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5. The Industrial operator is required by the ERCB, to have a comprehensive emergency plan in place that is initiated as soon as any sour gas release occurs, or if a release appears to be imminent. This plan includes drilling and operating wells and other sour facilities. Individuals living within a designated emergency planning zone (based on predicted sour gas release rates) are aware of such plans and would be evacuated immediately by the operator if a release occurred. Evacuation would commence with people downwind. The operator would also start mobile monitoring for sour gas. These plans detail ignition criteria if evacuation is impractical. An on-site command post is established by the operator to control the sour gas release (see Annex F).

6. Local municipalities are advised of a sour gas release in the very early stages and their emergency plans may also be activated in whole or in part, or on a contingency basis until the extent of the emergency is fully determined (see Annex G).

7. Concurrently, the Government's plan is activated by ERCB and APSS when a sour gas release occurs or is imminent. Initially, the emergency is managed from an ERCB Field office until a Main Control Headquarters is established, either at the ERCB field office or at another pre-determined location, and manned by representatives of key government departments/ agencies. It is from this Headquarters that the emergency is managed until it is over.

8. This plan describes the concept of operations, responsibilities of Alberta Government departments and agencies, and some detailed aspects of the management of the actual emergency. Each government department and agency has established procedures, separate from this plan, that detail how they will fulfill their responsibilities. In the event of any conflict between this plan and existing Government Acts or Regulations, those Acts or Regulations will take precedence.

IMPLEMENTATION

9. This plan will be implemented in part or in whole on the direction of ERCB, as follows:

a. Category One Release. ERCB will notify Alberta Environment, Workers' Health, Safety and Compensation and Alberta Public Safety Services.

(1) Alberta Environment and Workers' Health Safety and Compensation will respond as required by the situation.

(2) Alberta Public Safety Services will advise other government departments, but these departments do not need to take further action. APSS will provide regular information updates.

b. Category Two Release. The full plan will be implemented as described below.

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10. Concept. The response should proceed as follows:

a. ERCB will be made aware of the threat of (or actual occurrence of) a sour gas release, by the industrial operator (the licencee), or by other means;

b. ERCB will direct that this plan be activated, by commencing the alerting procedures (see paragraph 11) and will prepare and issue, if appropriate, a Closure Order;

c. if evacuation of residents is not practical or possible, then ignition of the release in accordance with Company Emergency Response Plans, or at the direction of ERCB, shall occur (see Annex H);

d. ERCB will establish two headquarters (see Annex A) to manage the response:

(1) an On-Site Command Post, in conjunction with the operator, to deal with control of the release and other matters within the immediate area of the sour gas release, and

(2) a Main Control Headquarters (MCHQ) to deal with matters outside the immediate area of the release, to provide support to the On-Site Command Post, and to provide an interface with the public, the local authorities and the Government of Alberta.

e. ERCB will co-ordinate the activities at the On-Site Command Post and monitor the industrial operator's activities related to the sour gas release. Workers' Health, Safety and Compensation has responsibility for ensuring that all necessary safety measures are observed at the work site;

f. ERCB has the authority to take charge of the situation if the operator is not available, or (in ERCB's view) responds improperly or has insufficient resources.

g. ERCB will co-ordinate all activities at the Main Control Headquarters;

h. Channels of communication to and from the Main Control Headquarters and to and from the public will be; (see chart at Annex B)

(1) to and from the public by telephone, advisories and direct contact;

(2) to and from the On-Site Command Post;

(3) to and from the Industrial Operator;

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(4) to and from those Local Authorities and the Local Health Units represented at the Main Control Headquarters;

(5) to and from those government departments and agencies represented at the Main Control Headquarters;

(6) through Alberta Public Safety Services to and from other Local Authorities;

(7) through Alberta Public Safety Services to and from government departments not represented at the Main Control Headquarters; and

(8) through Alberta Public Safety Services to the Government of Canada, except where direct communications are authorized.

i. the Main Control Headquarters is the main source of communication to and from the public, including: monitoring results; health risks; animal, crop and other concerns; and

j. if the situation escalates requiring such additional government support that, in the opinion of the ERCB, it would be difficult to continue to manage all matters at the Main Control Headquarters, Alberta Public Safety Services would be tasked to activate the Government of Alberta Emergency Response Centre to co-ordinate those activities which are impractical to manage at the Main Control Headquarters. The Emergency Response Centre would then be activated in accordance with the Government of Alberta Peacetime Emergency Operations Plan and Procedures.

11. Alerting. ERCB may learn of a sour gas release from many sources. Any government department or agency receiving information regarding a sour gas release must notify ERCB immediately.

ERCB then will immediately alert:

a. Alberta Public Safety Services who will, in turn, alert:

(1) all other departments, boards, agencies and crown corporations who will be involved in the Main Control Headquarters (see Annex A), to send a representative(s) to the MCHQ as soon as possible. The estimated time of arrival and the names of the representatives are to be advised to APSS who will advise the ERCB;

(2) all municipalities which are or which may be affected, who will then advise the local health unit;

(3) any other orders of government which might be involved;

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(4) the local health unit through Alberta Social Services and Community Health;

(5) any other organizations which might have a role to play or which could otherwise be affected (e.g. Indian Reservations through Emergency Planning Canada);

(6) AGT; and

(7) Railway companies whose tracks or facilities are near or within the emergency planning zone.

b. the RCMP and/or such other police forces having jurisdiction in the areas involved;

c. all local authorities whose geographic area is or might be affected by the release;

d. Alberta Environment;

e. Workers' Health, Safety and Compensation, and;

f. Energy and Natural Resources (if the release occurs in a forested or public lands area);

12. General Responsibilities

a. The Government of Alberta, its departments and agencies including the ERCB, is responsible for:

(1) developing and maintaining a plan and procedures for a co-ordinated response to a sour gas release;

(2) establishing an On-Site Command Post, and a Main Control Headquarters, to co-ordinate the Government's response in the case of a Category II release;

(3) monitoring and directing, if necessary, the operations at the location of the sour gas release including, where a Closure Order has been made, control of access and egress within the Closure Order area;

(4) providing prompt, co-ordinated assistance, and advice to municipalities and the industrial operator engaged in response to the sour gas release;

(5) ensuring that information and advice is given to the public concerning the sour gas release, and advice to the people who are or could be affected;

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(5) co-ordinating contacts with the Government of Canada as required;

(7) in the case of an escalation of the emergency, providing additional co-ordinated assistance to the On-Site Command Post and Main Control Headquarters, by activating the Government of Alberta Emergency Response Centre.

Detailed On-Site Command Post and Main Control Headquarters functions are at Annex C, and departmental and ERCB responsibilities are at Annex D to this plan.

b. Incorporated Municipalities are responsible for implementing their Municipal Emergency Plans to protect the health, safety and welfare of residents, using any or all of the resources available to the municipality (see Annex G);

c. Improvement Districts, Special Areas and Metis Settlements - the Minister of Municipal Affairs is responsible for implementing Municipal Emergency Plans to protect the health, safety and welfare of Improvement District, Special Area and Metis Settlement residents; and

d. Industrial operators are responsible for implementing their Company Emergency Response Plans (see Annex F).

NOTE: To avoid jurisdictional confusion, note that the Local Authorities would continue to exercise their normal responsibilities including evacuation of people outside the industrial operator's emergency planning zone.

13. Air Monitoring. MCHQ will ensure that sufficient air monitoring information is gathered and made available to the public so that it is able to meet its responsibilities under this plan. Obtaining information on contamination levels of hydrogen sulphide and other contaminants is the responsibility of:

a. Workers' Health, Safety and Compensation wherever there are workers directly involved in the operation or control of a worksite which is experiencing the sour gas release; and

b. Alberta Environment for all other areas.

14. Public Advisory. Whenever air monitoring information indicates that a threat or potential threat exists to the public (see Guidelines for Action, Annex E), the ERCB or the Main Control Headquarters, once it is established, will advise:

a. the public threatened or potentially threatened; and

b. all Local Authorities whose geographical area is or might be affected by the release.

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Notwithstanding the above, if the industrial operator or Alberta Environment, through their monitoring or otherwise, become aware of concentrations of contaminants that present an immediate threat to persons in the area, the industrial operator or Alberta Environment as the case may be, will immediately inform those persons and the On-Site Command Post or the Main Control Headquarters of such a threat.

15. Evacuation. The industrial operator will evacuate people from a predetermined emergency planning zone if a sour gas release occurs. Mobile H_2S monitoring would immediately begin to redefine the hazard zone and further evacuation may be required based on the operator's monitoring results. Once the MCHQ is established and Alberta Environment has set up a monitoring network, evacuation would take place as recommended by the MCHQ which would either advise the local authorities or contact residents directly. The Guidelines For Action established by Social Services and Community Health (Annex E) will be used to determine when the various levels of evacuation advisories will take place. If the health and safety of the public cannot be assured through evacuation, or if evacuation is impractical because of large numbers of residents (urban centers), or for other reasons, ignition of the release will be required (see Annex H). Evacuation advice will be in one of two general categories. They are:

a. Voluntary. Where there may be a health effect to people who experience increasing difficulty due to the presence of hydrogen sulphide or sulphur dioxide (see Annex E).

b. Urgent. Where hydrogen sulphide levels reach 20.0 p.p.m. evacuation will be urgently advised but will not be mandatory unless a state of emergency, or local emergency, is declared.

16. Evacuee Reception. Except for evacuations conducted by the industrial operator, Alberta Public Safety Services will alert those municipalities designated for reception of evacuees and will co-ordinate reception arrangements, where necessary.

17. Security.

a. the RCMP will be responsible for the control and security of any evacuated areas in the absence of a recognized municipal police force; and

b. the ERCB will arrange for control of air traffic through the area, through the Federal Ministry of Transport, who will in turn issue a NOTAM (Notice to Airmen) or a special Federal Ministerial Order.

18. Situation Reports. All Government of Alberta departments, boards and agencies involved in the emergency response will provide the Main Control Headquarters and On-Site Command Post with a daily situation summary which will be amalgamated by the MCHQ into a total Government situation report.

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19. Public Information. The communications staff at the Main Control Headquarters will assist in the management and release of information to the media on behalf of the Main Control Headquarters. A public inquiry centre will be established at the Main Control Headquarters to respond to inquiries from the general public. Telephone numbers for the public inquiry centre, and for media inquiries, will be widely publicized during the early stages of the emergency.

20. Communications. The telephone will be the primary means of communication. Where practical, the telephone will be supported by a "hard copy" capability, either as an attachment to the telephone, telex or other means. Should additional communications arrangements be required, Alberta Government Telephones will be tasked to provide them. Alberta Government emergency communications requirements will be co-ordinated through Alberta Public Safety Services.

21. Government of Canada Assistance. Requests for federal government assistance from any government department or agency, except where direct communications are authorized, shall be directed to Headquarters, Alberta Public Safety Services, for transmission to the Regional Director, Emergency Planning Canada or to the Department of National Defence, if necessary.

22. Post-event investigation and follow-up is the responsibility of each government department or agency for those matters which relate to their respective jurisdiction.

23. This plan will be reviewed at least annually at the conclusion of the calendar year. Amendments will be made immediately as required.

Annex A - Sour Gas Release Emergency Response Organization
Annex B - Sour Gas Release Emergency Response Information Flow
Annex C - Sour Gas Release Functions
Annex D - Government of Alberta Responsibilities For Special Services Related to a Sour Gas Release
Annex E - Guidelines for Action; Hydrogen Sulphide and Sulphur Dioxide
Annex F - Industrial Operator Responsibilities
Annex G - Municipal Emergency Plan
Annex H - Ignition Guidelines

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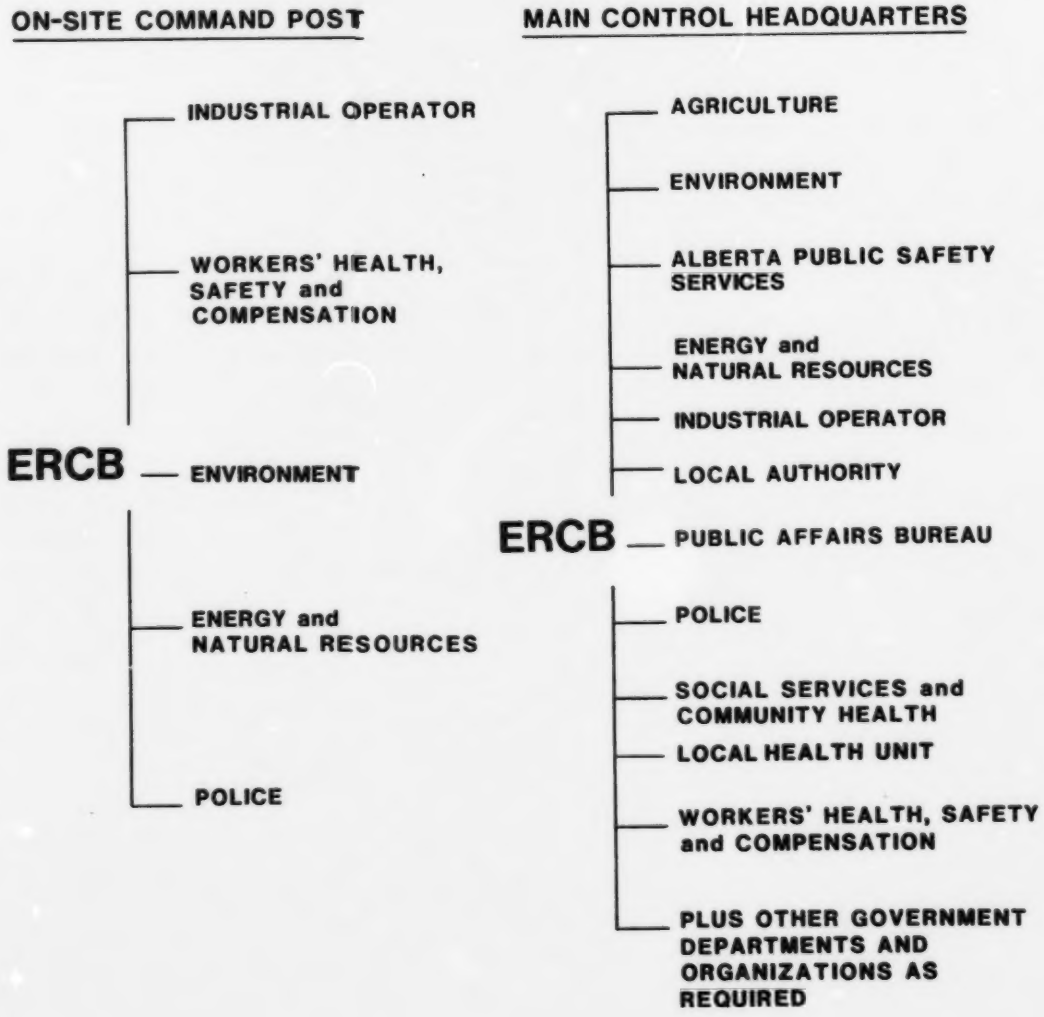
Annex A to
Government of Alberta
Emergency Response Plan
for a Sour Gas Release
Dated March 86

SOUR GAS RELEASE
EMERGENCY RESPONSE ORGANIZATION



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Annex B to
Government of Alberta
Emergency Response Plan
for a Sour Gas Release
Dated March 86

SOUR GAS RELEASE
EMERGENCY INFORMATION FLOW

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Annex C to
Government of Alberta
Emergency Response Plan
for a Sour Gas Release
Dated March 86

SOUR GAS RELEASE

ON-SITE COMMAND POST FUNCTIONS

- During the early stages of the release, monitor and redefine the hazard area until the MCHQ is established.
- Control and supervise activities at the site to normalize the situation.
- Warnings to, and evacuation of, residents within the Closure Order area.
- Ensure protection of life and property within the Closure Order area.
- Ensure the health and safety of workers at the gas release site.
- Monitoring gas concentrations within the Closure Order area for worker safety.
- Ensure security within the Closure Order area.
- Provide technical information related to the gas release.
- Provide situation reports to Main Control Headquarters.

MAIN CONTROL HEADQUARTERS FUNCTIONS

- Provide support to the On-Site Command Post. Compile and evaluate air monitoring information.
- Monitor gas concentrations outside the Closure Order area.
- Determine and define the threatened area.
- Monitor safety of all workers in the threatened area.
- Monitor security and movement within the threatened area, except within the Closure Order area.
- Provide liaison, co-ordination and support for affected Local Municipalities.

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- Make evacuation and ignition decisions.
- Provide warning and assistance to Local Authorities for evacuation and evacuee reception activities.
- Provide situation reports to the Government of Alberta.
- Provide situation reports to the On-Site Command Post.
- Provide information to the media.
- Provide information to, and answer inquiries from, the public.
- Compile and disseminate health effects information.
- Compile and disseminate agricultural effects information, and any other environmental effects information.
- Provide technical advisory services.
- Obtain weather information.
- Remain operational until the source gas release has been controlled and monitoring indicates no gas concentrations are present.

EMERGENCY RESPONSE CENTRE (IF ACTIVATED)

- Provide co-ordinated Government of Alberta support to the Main Control Headquarters.
- Arrange for any outside resources required by the Main Control Headquarters.
- Arrange for resources of the Government of Canada (or other outside governments), if required, to support the Main Control Headquarters.
- Process situation reports to/from the Main Control Headquarters.
- Assume and exercise control of the total response (government, municipal, industrial) upon the declaration of a State of Emergency by the Lieutenant Governor in Council.

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Annex D to
Government of Alberta
Emergency Response Plan
for a Sour Gas Release
Dated March 86

GOVERNMENT OF ALBERTA

RESPONSIBILITIES FOR SPECIAL SERVICES

RELATED TO A SOUR GAS RELEASE

1. The following sets forth the responsibilities of various Government of Alberta departments, boards, and agencies for providing special services related to emergency operations due to a sour gas release.

2. AGRICULTURE

   a. Provide advice to the Main Control Headquarters and the public regarding the effects of contaminants on livestock, plants and soil.

   b. Provide advice to the Main Control Headquarters and the public on any mitigation procedures or arrangements to be effected.

   c. Provide a representative to the Main Control Headquarters on a 24-hour basis, if requested by ERCB.

   d. Prepare a post blow-out assessment of the impact of the release on animals and crops, if necessary.

3. PUBLIC SAFETY SERVICES

   a. Implement the Government of Alberta telephone fan-out to alert all affected departments.

   b. Alert all affected municipalities, other orders of government and industry.

   c. Confirm that "K" Division, RCMP has been informed.

   d. Provide a staff officer to the Main Control Headquarters.

   e. Provide a Public Safety Services Liaison Officer to the Main Control Headquarters.

   f. Activate the Government of Alberta Emergency Response Centre if required.

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g. Collect, collate and analyze the Government of Alberta emergency operations costs.

h. Co-ordinate reception plans for evacuation and reception municipalities.

i. Inform Alberta Government Telephones of priority of emergency communications.

j. Make recommendations to Government regarding assistance to disaster victims and the sharing of costs of emergency or disaster operations.

k. Co-ordinate the preparation and regular review of the Alberta Government Emergency Response Plan for a Sour Gas Release.

4. ENERGY AND NATURAL RESOURCES

a. Provide emergency temporary accommodation, and emergency feeding equipment, if requested by ERCB.

b. Provide to the ERCB assessment relating to all aspects of the renewable resources sector.

c. Provide advice to ERCB with regard to the ignition of a sour gas release in a public lands area.

d. Provide a representative to the On-Site Command Post and the Main Control Headquarters on a 24-hour basis, if requested by ERCB.

5. ENERGY RESOURCES CONSERVATION BOARD

a. Determine if a sour gas release is Category I or Category II.

b. Alert the Government of Alberta to a sour gas release through Alberta Public Safety Services.

c. Directly alert the RCMP detachment nearest the scene, Local Authorities whose geographic area is or might be affected by the release, Alberta Environment, Energy and Natural Resources and Worker's Health Safety and Compensation.

d. Ensure notification of the public threatened or potentially threatened.

e. Determine the extent of the immediate hazard and issue a Closure Order, if necessary.

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f. Establish with the operator estimates of the sour gas release rate.

g. Direct ignition of a sour gas release, if deemed necessary.

h. Ensure the industrial operator is advising persons in immediate danger of high contaminant concentrations to evacuate by house-to-house contact (assisted by the RCMP and Local Authority).

i. Monitor and direct, if necessary, operations and mitigation activities within the Closure Order area, including the ordering of evacuation and the control of access.

j. Arrange for security within the Closure Order Area.

k. Establish an On-Site Command Post and a Main Control Headquarters and manage the activities thereof.

l. Arrange for closure of airspace as required.

m. Establish a public inquiry centre at the MCHQ, with the assistance of the Public Affairs Bureau.

n. Take control of operations if, in the opinion of the ERCB, the operations are being handled improperly, or if the operator has insufficient resources.

6. ENVIRONMENT

a. Manage all sour gas monitoring activities except those activities for which Workers' Health, Safety and Compensation are responsible under the Occupational Health and Safety Act.

b. Determine areas at risk from the sour gas release.

c. Ensure that adequate equipment is available for monitoring.

d. In consultation with Social Services and Community Health, recommend evacuation, to the Main Control Headquarters, of any areas where excessive levels of sour gas are detected. (In emergency situations nearby residents may also be warned directly.)

e. When required, establish a weather monitoring facility in the vicinity of the sour gas release.

f. Provide representatives to the On-Site Command Post and the Main Control Headquarters on a 24-hour basis.

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g. Monitoring and ensuring containment of discharges or potential discharges of condensate or other release related liquids into a watercourse.

7. MUNICIPAL AFFAIRS

a. Provide damage and loss appraisals of property to affected citizens, within the expertise of the department.

b. Manage the emergency response, including the declaration of a State of Local Emergency, for those municipalities over which the department has direct control.

c. Provide a representative to the Main Control Headquarters on a 24-hour basis, if requested by ERCB.

8. PUBLIC AFFAIRS BUREAU

a. Will assist ERCB to keep the public informed by:

(1) Making public information releases based on the situation reports developed at the Main Control Headquarters;

(2) making information releases regarding the general H_2S effects to health, safety and welfare; and

(3) other information activities as considered desirable.

b. Assign a Public Affairs Officer to the Main Control Headquarters on a 24-hour basis, and to the Emergency Response Centre, if activated.

c. Staff a public inquiry centre, having a publicized telephone number, to support the Main Control Headquarters.

d. Establish a Public Affairs Management Control Centre, at the Public Affairs Bureau, responsible for all Public Affairs information coordination.

9. SOCIAL SERVICES AND COMMUNITY HEALTH/LOCAL HEALTH UNITS

a. Establish health safety levels for the escaping contaminants (see Annex E).

b. Monitor the health effects of the incident, to ensure appropriate data is collected, and investigate such health effects. Advise on the appropriate remedial measures to be undertaken. May recommend further investigations or research after the event.

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c. Provide advice to the government and to the Main Control Headquarters on the existing or potential health effects of the incident, as determined in consultation with Alberta Environment.

d. Provide health advice and safety levels for any health care or special care facilities and for the more vulnerable residents, when it is determined where these facilities are located.

e. Provide information to the public inquiry centre.

f. Provide a representative to the Main Control Headquarters on a 24-hour basis.

10. SOLICITOR GENERAL

Through the RCMP, or a recognized police force:

a. Maintain law and order.

b. Warn and reinforce local police services, if required.

c. Notify the ERCB or Alberta Public Safety Services of a sour gas release if the first contact is through their detachments.

d. Act on behalf of the medical examiner in accordance with the Fatalities Inquiries Act.

e. Provide security, traffic and crowd control, as required.

f. Provide a representative to the On-Site Command Post and the Main Control Headquarters on a 24-hour basis.

11. WORKERS' HEALTH, SAFETY AND COMPENSATION

a. Monitor the situation to ensure that necessary precautions are taken to protect the health and safety of workers involved in the operation or control of the worksite which is experiencing the sour gas release. This responsibility includes workers from government departments.

b. Ensure that equipment and personnel required for on-site evaluation of chemical levels are provided by the appropriate employers.

c. Provide information on toxic chemicals to the Main Control Headquarters.

d. Provide a representative to the On-Site Command Post and the Main Control Headquarters on a 24-hour basis.

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12. ALBERTA GOVERNMENT TELEPHONES

a. Provide emergency communications services to government departments as co-ordinated by Alberta Public Safety Services.

b. Provide operating and maintenance personnel to ensure the continuity of emergency communications services.

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Annex E to
Government of Alberta
Emergency Response Plan
for a Sour Gas Release
Dated March 86

GUIDELINES FOR ACTION

HYDROGEN SULPHIDE

If residents are exposed to hydrogen sulphide, these are the actions they can take:

If indoors, and the smell of hydrogen sulphide becomes offensive, close all doors and windows;

Monitor the radio or television for explanation, information on contaminant levels and instructions;

1. If the level of hydrogen sulphide reaches 1.0 p.p.m. or greater; this is a voluntary evacuation level for sensitive individuals (that is, those persons with pre-existing health problems) and would include the following conditions and sensitivities:

   a. chronic respiratory disorders, such as bronchial asthma, bronchitis, emphysema:

   b. acute respiratory infections;

   c. chronic cardiac failure;

   d. pregnancy;

   e. children - especially preschoolers:

   f. hepatic disease (liver):

   g. neurological problems;

   h. patients being treated with immunosuppressants;

   i. eye problems.

While these levels are useful as a guide, anyone continuing to experience symptoms should consult a physician and leave the area.

2. The Department of Social Services and Community Health advises that 5.0 p.p.m. is the level at which voluntary evacuation could occur for individuals without pre-existing health problems who experience increasing difficulty.

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3. Additionally, the public will be advised when levels reach both 10.0 p.p.m. and 15 p.p.m. The purpose of this public statement is to advise residents that the trend of hydrogen sulphide concentration is increasing during the release episode.

4. When hydrogen sulphide readings reach the 20 p.p.m. level, urgent evacuation will be advised.

PREGNANCIES

Even though there is no reliable scientific evidence to indicate that hydrogen sulphide has an adverse health effect on the fetus, the Department of Social Services and Community Health, advises that pregnant women be included as "sensitives".

EVACUATION COMMENT

It is important to note that the voluntary action levels should be viewed as an "opportunity for evacuation" and not as a mandatory action statement. In this way, residents can assume greater responsibility for their own health.

The public will be advised if and when the levels reach 5, 10, and 15 p.p.m. so that they are aware of an existing trend in the increase or decrease of levels of hydrogen sulphide.

SULPHUR DIOXIDE

Environmental monitoring equipment will measure sulphur dioxide levels as a result of the flaring of a sour gas release.

The major sub-groups of the population that appear likely to be most sensitive to the effects of sulphur dioxide include:

- asthmatics
- individuals not diagnosed as asthmatic but with allergic disorders
- individuals with chronic obstructive pulmonary or cardiovascular disease
- the elderly
- children - especially preschoolers.

If residents are indoors and the smell of sulphur becomes offensive; they should close all doors and windows, and monitor the radio or television for explanation, information on contaminant levels and instructions.

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If sulphur dioxide reaches an average level of 0.3 p.p.m. for 24 hours, those individuals who experience difficulties should consult a physician and voluntarily leave the area.

If sulphur dioxide reaches an average level of 1.0 p.p.m. for 3 hours, those individuals who experience difficulty should consult a physician and voluntarily leave the area.

Notes: These levels are a guide only. Should a person experience increasing difficulty due to the presence of sulphur dioxide, that person should consult a physician and voluntarily leave the area.

The public will be advised when the levels of sulphur dioxide begin to exceed these guidelines so that they are aware of developing trends.

Although these guidelines for action are the result of scientific consensus, they may be adjusted at the time of an uncontrolled sour gas release depending upon local circumstances.

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Annex F to
Government of Alberta
Emergency Response Plan
for a Sour Gas Release
Dated March 86

INDUSTRIAL OPERATOR RESPONSIBILITIES

- Inform the ERCB of the sour gas release.
- Implement the Industrial Operator's Emergency Procedures Plan.
- Ignite sour gas release if Industrial Operator Procedures so state, or if directed by ERCB.
- Monitor contaminant levels downwind as directed by Industrial Operator Procedures or by the ERCB.
- Ensure residents near possible release site are notified of both the hazard and evacuation guidelines.
- Ensure that transportation arrangements are made for the prompt evacuation of those residents who may be immediately at risk.
- Notify residents of evacuation advice or order as directed.
- Provide a representative to the MCHQ.
- Design and implement strategy for beginning control of the release after review with the ERCB.
- Provide monitoring personnel and equipment.
- Provide support and take such further action as directed by ERCB.
- Obtain the most accurate release rates possible for the hydrogen sulphide and natural gas being emitted from the well, pipeline or other facility from which the release is occurring.

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Annex G
Government of Alberta
Emergency Response Plan
for a Sour Gas Release
Dated March 1986

MUNICIPAL EMERGENCY PLAN

The Public Safety Services Act requires the local authority of each municipality to be responsible for emergency planning and for the direction and control of emergency response. In the province 299 municipalities have emergency plans in place which are jointly reviewed on a regular basis with APSS field staff.

Municipal Emergency Plans vary depending on the circumstances of each community however generally they deal with the following:

- Authority for the Plan
- Implementation
- Direction and Control
- Organization and Functions
- Taskings
- Communications
- Transportation
- Hazard Analysis
- Medical Services
- Police
- Fire Services
- Public Works
- Social Services
- Evacuation and Reception

Specific reference may be found in these plans to the Industrial Operator's plan for sour gas facilities in the area, as both the industrial operator and the municipality have a responsibility to co-ordinate their respective plans with each other. The municipality plays a major role in the notification and evacuation of people outside the industrial operator's emergency planning zone (see Guidelines for Action, Annex E).

Citizens who wish to learn more about their municipality's emergency preparedness are advised to contact their elected representatives or the local municipal Director of Disaster Services.

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Annex H
Government of Alberta
Emergency Response Plan
for a Sour Gas Release
Dated March 1986

IGNITION GUIDELINES

FOR SOUR GAS FACILITIES

The ignition criteria for wells, plants, and other sour gas facilities will normally be set out in detail in each individual operator's site-specific plans. These plans and the ignition criteria must take into consideration any special situation, conditions or features for that specific facility. All site-specific plans must be approved by the ERCB.

In more general terms, the ignition policy, in concert with evacuation, is designed to ensure that if there is a release of H_2S the health and safety of the public will be protected by either evacuation or, if evacuation is not practical or possible, then by ignition of the release.

The ERCB has identified two general types of situations that require ignition. These are:

1. Facilities that have a very high potential H_2S release rate and are located near population centres where evacuation would not be feasible.

   For these facilities the ERCB requires that any H_2S release be immediately ignitied, with the only exception being that the ERCB could delay ignition if it was satisfied that control could be quickly regained and that the health and safety of residents would not be at risk.

2. All other facilities.

   People located within the emergency planning area for the facility would be evacuated immediately. Should evacuation not be practical and should the people's health and safety be at risk, the facility would be ignited. In assessing whether people would be at risk, consideration would be given to the following factors: H_2S monitoring information, weather conditions, population proximity and density, progress of control procedures, feasibility and progress of evacuation, and reported health symptoms.

The decision to ignite the release, if the industry operator has not already done so under its site-specific plan, would be made by the ERCB, with advice from other government agencies. This decision normally will be made by the ERCB Emergency Manager working at the Main Control Headquarters.